

REMARKS

This Preliminary Amendment is being filed concurrently with a Request for Reconsideration (RCE). The Applicants respectfully request entry of the following amendment in advance of the First Office Action on the merits.

The claims in the application are 3-12. Claims 4, 6, 11 and 12 have been amended to better describe the invention. No new matter has been added.

Favorable reconsideration of the application as amended is respectfully requested.

In the Office Action mailed July 12, 2006, the Examiner rejected Claims 6,3,4 and 9 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,391,388 to Hilgenfeld et al. (herein "Hilgenfeld"). In making the rejection, the Examiner stated that Hilgenfeld is directed to "an ink jet printing method . . ." (See Office Action p.2). The Applicants respectfully disagree. Prior to addressing the prior art rejection a brief discussion of the present invention is provided.

The present invention is directed to improved ink jet printing avoiding discoloration upon baking. Prior to the present invention, baking of each particular color pigment had to be carried out to avoid discoloration, which was time-consuming and costly. However, the present invention explicitly provides ink jet printing of superiorly clear images not subject to discoloration during baking, permitting representation of intermediate colors having a wider color region.

These and other advantages are explicitly attained by the present invention as recited in independent Claim 6 which is directed to an ink jet printing method comprising the steps of printing upon a base material, four color inks of inorganic pigments comprising both magenta ink of gold purple and red ink of cadmium red as the red component, yellow ink and cyan ink, followed by baking. Preferably, five color inks are used (Claim 11), while the respective inks are separately ejected upon the base material and then baked, instead of mixing inks (colors) prior to ejecting to the base material (Claims 11 and 12).

The comparative evidence presented in Tables 1 and 2 on page 24 of the present application documents the explicit improvement in color representation and image impression when printing a four color ink set comprising the claimed combination of inks (Examples 1-3) over printing of inks not comprising the claimed combination (Comparative Examples 1 and 2). The applied art fails to teach or suggest the claimed features and documented advantages, for the following reasons.

As acknowledged by the Examiner in the Office Action mailed February 6, 2006, Hilgenfeld et al fails to teach or suggest ink jet printing. (See Office Action mailed 2/06/2006 page. 4, Para. 4). As is well settled, anticipation requires “identity of invention”. *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply*, 33 USPQ2d 1496, 1498 (Fed. Cir. 1995). Each and every element recited in a claim must be found in a single prior art reference and arranged as in the claim. *In re Marshall*, 198 USPQ 344, 346 (CCPA 1978); *Lindemann Maschinenfabrik v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). There must be no differences between what is claimed and what is disclosed in the applied reference. *In re Kalm*, 154 USPQ 10, 12 (CCPA 1967); *Scripps v. Genentech*, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). “Moreover, it is incumbent upon the Examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference.” *Ex parte Levy*, 17 USPQ2d 1461, 1462 (BPAI 1990). The Examiner is required to point to the disclosure in the reference “by page and line” upon which the claim allegedly reads. *Chiong v. Roland*, 17 USPQ2d 1541, 1543 (BPAI 1990). Since the Examiner has acknowledged that Hilgenfeld does not teach ink jet printing and the present claims are specifically directed to ink jet printing, then for this reason alone the rejection of Claims 6,3,4 and 9 under 35 U.S.C §102(b) in view of Hilgenfeld must be reconsidered and withdrawn.

Moreover, in Hilgenfeld, the specific printing inks are mixed in advance of application (See Hilgenfeld Example 1 at column 5, line 53). In conventional screen-printing as disclosed in Hilgenfeld, it is necessary to mix the primary colors in advance to obtain desired coloring. In stark contrast, the ink jet printing of the present invention provides the colorants to the base material separately and does not pre-mix the colors prior to providing them to the base material. Accordingly, for this additional reason the

rejection under 35 U.S.C. §102(b) in view of Hilgenfeld must be reconsidered and withdrawn.

In the Office Action, mailed July 12, 2006, Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hilgenfeld in view of U.S. Patent 6,741,386 to Minami (herein “Minami”). As stated above, the primary reference Hilgenfeld, does not teach or suggest the use of ink jet printing as required by the claimed invention. The Examiner has referenced Minami to correct this factual defect. Although Minami may teach an ink jet printing method, Minami does not teach or suggest baking or firing the base material once the ink jet process is complete. Therefore, the combination of Hilgenfeld in view of Minami does not teach or suggest the invention as set forth in Claim 5. Accordingly, the Applicants respectfully request that the rejection of Claim 5 under 35 U.S.C. § 103(a) over Hilgenfeld in view Minami be reconsidered and withdrawn.

In the Office Action mailed July 12, 2006, Claims 7,8 and 10 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hilgenfeld in view of JP 2001081363 to Oishi et al. (herein “Oishi”).

Oishi simply discloses an ink jet printing method but is silent on the particular red inorganic pigments used, and therefore fails to even recognize the specific advantages that might be obtained by combining specific types of red pigment components in ink jet printing, without premixing as documented by the comparative testing in the present application. Moreover, although Oishi does describes ink jet printing in general, Oishi specifically requires “at least six elements which are and inorganic pigment” (See Abstract) and does not teach or suggest a four or five color ink set as used in the present invention. In fact, one skilled in the art after reading Hilgenfeld would be lead away from using the teachings of Oishi since Hilgenfeld teaches 1) screen printing and 2) that it is necessary to mix the primary colors in advance in order to obtain desired coloring wherein the Oishi discusses ink jet printing and does not require premixing. In essence to combine the teachings of Oishi with the teachings of Hilgenfeld would in affect destroy the inventive intent behind the Hilgenfeld reference.

Furthermore, Hilgenfeld does not mention that there is any problems with premixing

colorants and using screen printing as disclosed therein and therefore does not provide the necessary motivation to one skilled in the art to look beyond the teachings in Hilgenfeld and combine it with the teachings of another reference, especially Oishi since the combination of the two references would in affect destroy the inventive intent behind the Hilgenfeld reference. Therefore, Hilgenfeld does not provide any motivation to combine the two references, an element that must be present in order for an obviousness rejection to be maintained.

In view of the foregoing, it is respectfully requested that, Claims 7, 8 and 10 rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hilgenfeld in view of Oishi in the Office Action mailed July 12, 2006, be reconsidered and withdrawn.

In the Office Action mailed July 12, 2006, claims 11 and 12 have been rejected under 35 USC 103(a) over Hilgenfeld in view of JP 20010030678 to Katsuragi et al. (Katsuragi). As stated above Hilgenfeld does not teach or suggest an ink jet printing method. Katsuragi teaches ink jet printing methods performed on paper or similar recording medium, which is never subjected to a baking step. For this reason alone, the rejection of Claims 11 and 12 must be reconsidered and withdrawn. Moreover, Katsuragi fails to teach or suggest inorganic pigments as recited in claims 11 and 12. For this additional reason, the rejection of claims 11 and 12 should be reconsidered and withdrawn.

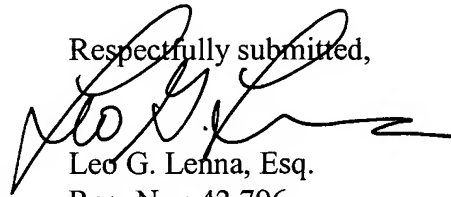
In view of the foregoing, the Applicants respectfully request that the rejection of Claims 11 and 12 under 35 USC 103(a) over Hilgenfeld in view of Katsuragi made in the Office Action mailed July 12, 2006, be reconsidered and withdrawn.

The remaining art of record has not been applied against the claims and will not be commented upon further at this time.

In view of the above amendments and remarks, it is respectfully submitted all pending claims herein are in condition of allowance. Should the Examiner have any questions, it is respectfully requested that he contact the undersigned attorney.

Early favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Leo G. Lenna', written over the typed name.

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